

ROLL NO. (IN FIGURES) 81057

BOOKLET NO. :

ROLL NO. (IN WORDS)

01495

(To be written by the candidate)

Name of the Candidate :

Father's Name :

Centre of Examination :

Total No. of Questions : 100]

[Total No. of Printed Pages : 28

M.C.A ENTRANCE TEST, 2024

Code No. 9077

Time Allowed : 1½ Hours]

[Maximum Marks : 100

IMPORTANT NOTE

- (i) OMR Answer Sheet will be supplied by the Examination Centre Superintendent for answering the questions.
- (ii) Use Blue/Black Ink Ball Pen only to darken the appropriate circle/oval in the OMR Answer Sheet. *No Sophisticated Pens are allowed.*
- (iii) Darken one circle/oval deeply for each question in the OMR Answer Sheet, as faintly darkened circle might be rejected by the Optical Scanner.
- (iv) Darkening of *more than one circle/oval* shall be rejected by the scanner.
- (v) Before dealing with the question paper, fill-up the required information with Blue/Black Ink Ball Pen correctly both in the Question Booklet and in the OMR Answer Sheet.
- (vi) Do not fold the OMR Answer Sheet nor put any mark here and there to avoid rejection by the Optical Scanner.
- (vii) Write Roll No. carefully on the OMR Answer Sheet and darken the appropriate circle/oval properly.
- (viii) **Each question carries One Mark.**
- (ix) **There will be No Negative Marking.**
- (x) Use of Calculator is not allowed.
- (xi) Rough work be done on the sheet(s) at the end.
- (xii) Mobile telephones (even on switch-off mode) and such other electronic devices are not allowed inside the examination hall.
- (xiii) No over-writing, cutting, erasing or use of white fluid is allowed.
- (xiv) **THE QUESTION PAPER-BOOKLET WILL BE RETAINED BY THE CANDIDATE AFTER THE ENTRANCE TEST IS OVER.**

SECTION-A
(GENERAL LOGICAL ABILITY AND APTITUDE)

1. Find the wrong number in the sequence :

52, 51, 48, 43, 34, 27, 16

(A) 27 $\begin{matrix} -3 \\ -5 \\ -9 \\ -7 \\ -11 \end{matrix}$

(B) 34

(C) 43

(D) 48.

2. What will be the next term in the following

DCXW, FEVU, HGTS, ? $\begin{matrix} +1 \\ +2 \end{matrix}$

(A) AKPO $\begin{matrix} +1 \\ +2 \end{matrix}$

(B) ABYZ

(C) JIRQ

(D) LMRS.

3. E is the son of A, D is the son of B, E is married to C, C is the daughter of B. How is D related to E?

(A) Brother

(B) Uncle

(C) Father-in-law

(D) Brother-in-law.

4. If INSURANCE is coded as ECNARUSNI, how HINDRANCE will be coded?

(A) CADNIHWCE

(B) HANODEINR

(C) AENIRHDCN

(D) ECNARDNIH.

5. In a certain code language '123' means 'hot filtered coffee'; '356' means 'very hot day'; '589' means 'day and night'. Which of the following digit means for 'very'?
- (A) 2
(B) 5
☒ (C) 6
(D) 8.
6. If FARE = 9526; RACE = 2516; SOURCE = 347216. What is the code for SCARCE?
- (A) 351216
☒ (B) 315216
(C) 312516
(D) 213156.
7. On January 12, 1980, it was a Saturday, The day of the week on January 12, 1979 was :
- (A) Thursday
☒ (B) Friday
(C) Saturday
(D) Sunday.
8. In the following question two statements are followed by two conclusions. Read the conclusion and then decide which of the given conclusion logically follows.
- Statements :
1. Some kings are queens.
 2. All queens are beautiful.
- Conclusions :
- I. All kings are beautiful.
 - II. All queens are kings.
- (A) If only conclusion I follows
(B) If only conclusion II follows
(C) If either I or II follows
☒ (D) If neither I nor II follows.

9. Venerate : Worship : : Extol : ?

- (A) Glorify
- (B) Homage
- (C) Compliment
- (D) Recommend.

10. If A = 5, B = 6, C = 7, D = 8 and so on, what do the following numbers stand for?

17, 19, 20, 9, 8

- (A) Plane
- (B) Moped
- (C) Motor
- (D) Tonga.

Directions (Q. Nos. 11–15) : Read the following information carefully and answer the questions given below it :

In a car exhibition, seven different companies, viz. Cardilac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo were displayed in a row, facing east such that :

1. Cardilac car was to the immediate right of Fargo.
2. Fargo was fourth to the right of Fiat.
3. Maruti car was between Ambassador and Bedford.
4. Fiat, which was third to the left of Ambassador car, was at one of the ends.

11. Which of the following was the correct position of the Mercedes?

- (A) Immediate left of Cardilac
- (B) Immediate left of Bedford
- (C) Between Bedford and Fargo
- (D) Fourth to the right of Maruti.

12. Which of the following is definitely true?

- (A) Fargo car is between Ambassador & Fiat
- (B) Cardilac car is to the immediate left of Mercedes
- (C) Fargo is to the immediate right of Cardilac
- (D) Maruti is fourth to the right of Mercedes.

13. Which cars are on the immediate either sides of the Cardilac car?

- (A) Ambassador and Maruti
- (B) Maruti and Fiat
- (C) Fiat and Mercedes
- ☒ (D) None of these.

14. Which of the following is definitely true?

- ☒ (A) Maruti is to the immediate left of Ambassador
- (B) Bedford is to the immediate left of Fiat
- (C) Bedford is at one of the ends
- (D) Fiat is second to the right of Maruti.

15. Which of the following groups of cars is to the right of Ambassador car?

- (A) Cardilac, Fargo & Maruti
- (B) Maruti, Bedford and Fiat
- (C) Mercedes, Cardilac and Fargo
- (D) Bedford, Cardilac and Fargo.

Directions (Q. Nos. 16–20) : Study the following information carefully and answer the questions given below :

1. A, B, C, D, E and F are six members in a family in which there are two married couples.
2. D is the brother of F. Both D and F are lighter than B.
3. B is the mother of D and lighter than E.
4. C, a lady, is neither the heaviest nor the lightest in the family.
5. E is lighter than C.
6. The grandfather is the heaviest in the family.

16. How many male members are there in the family?
- (A) 2
 - (B) 4
 - ☒ (C) Data inadequate
 - (D) None of these.
17. How is E related to F?
- (A) Grandmother
 - (B) Brother
 - (C) Father
 - ☒ (D) Data inadequate.
18. How is C related to D?
- (A) Sister
 - (B) Grandmother
 - ☒ (C) Cousin
 - (D) None of these.
19. Which of the following is a pair of married couples?
- (A) AD
 - (B) BC
 - (C) BE
 - (D) None of these.
20. Who among the following will be in the second place if all the members in the family are arranged in descending order of their weight?
- (A) D
 - (B) A
 - ☒ (C) C
 - (D) Data inadequate.

SECTION-B
(MATHEMATICS)

21. The price of cooking oil has increased by 25%. The percentage of reduction that a family should effect in the use of cooking oil so not to increase the expenditure on this account is :
- (A) 25%
(B) 30%
☒ (C) 20%
(D) 15%.
22. The average weight of 8 persons increases by 2.5 kg when a person weighing 60 kg is replaced by a new person. What might be the weight of the new person?
- (A) 76 kg
(B) 76.5 kg
☒ (C) 80 kg
(D) Data inadequate.
23. A person completes a journey of 48 km in 2 hrs. How much time will he take to cover a distance of 252 km?
- (A) 10 hours
(B) 11 hours
☒ (C) $10\frac{1}{2}$ hours
(D) None of the above.
24. Rs. 2,100 is lent at compound interest of 5% per annum for 2 years. Find the amount after two years.
- (A) Rs. 2,300
☒ (B) Rs. 2,315.25
(C) Rs. 2,310.5
(D) Rs. 2,320.

25. A box has 210 coins of denominations one-rupee and fifty paise only. The ratio of their respective values is 13 : 11. The number of one-rupee coin is :
- (A) 65
(B) 66
(C) 77
(D) 78.
26. A person sold a car at a gain of 15%. Had he brought it for 25% less and sold it for Rs. 600 less, he would have made a profit of 32%. The cost price of the car was :
- (A) Rs. 3,750
(B) Rs. 3,250
(C) Rs. 2,750
(D) Rs. 2,250.
27. If A and B together can complete a work in 18 days, A and C together in 12 days, and B and C together in 9 days, then B alone can do the work in :
- (A) 18 days
(B) 24 days
(C) 30 days
(D) 40 days.
28. The length of the bridge, which a train 130 metres long and travelling at 45 km/hr can cross in 30 seconds is :
- (A) 200 m
(B) 225 m
(C) 245 m
(D) 250 m.

29. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is :
- (A) 2.3 m
(B) 4.6 m
(C) 7.8 m
(D) 9.2 m.
30. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?
- (A) 4 years
(B) 8 years
(C) 10 years
(D) None of these.
31. An error 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is :
- (A) 2%
(B) 2.02%
(C) 4%
(D) 4.04%.
32. 66 cubic centimetres of silver is drawn into a wire 1 mm in diameter. The length of the wire in metres will be :
- (A) 84 metres
(B) 90 metres
(C) 168 metres
(D) 336 metres.

33. The difference between a two-digit number and the number obtained by interchanging the positions of its digits is 36. What is the difference between the two digits of that number?
- (A) 3
(B) 4
(C) 9
(D) Cannot be determined.
34. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is :
- (A) 276
(B) 299
(C) 322
(D) 345.
35. A pump can fill a tank with water in 2 hours. Because of a leak, it took $2\frac{1}{3}$ hours to fill the tank. The leak can drain all water of the tank in :
- (A) $4\frac{1}{3}$ hours
(B) 7 hours
(C) 8 hours
(D) 14 hours.
36. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.
- (A) 2 hours
(B) 3 hours
(C) 4 hours
(D) 5 hours.

37. In a 500 m race, the ratio of the speeds of two contestants A and B is 3 : 4. A has a start of 140 m. Then, A wins by :
- (A) 60 m
 - (B) 40 m
 - (C) 20 m
 - (D) 10 m.
38. The banker's gain of a certain sum due 2 years hence at 10% per annum is Rs. 24. The present worth is :
- (A) Rs. 480
 - (B) Rs. 520
 - (C) Rs. 600
 - (D) Rs. 960.
39. A bag contains 2 Red, 3 Green and 2 Blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?
- (A) $10/21$
 - (B) $11/21$
 - (C) $2/7$
 - (D) $5/7$.
40. In a 729 litres mixture of milk and water, the ratio of milk to water is 7 : 2 to get a new mixture containing milk and water in the ratio 7 : 3, the amount of water to be added is :
- (A) 81 litres
 - (B) 71 litres
 - (C) 56 litres
 - (D) 50 litres.

SECTION-C
(COMPUTER AWARENESS)

41. Which of the following memory stores crucial information essential to operate the system, like the program essential to boot the computer?
- (A) RAM
 - (B) ROM
 - (C) DRAM
 - (D) SRAM.
42. Who among the following is known for developing the concept of e-mail?
- (A) Michel Derstuses
 - (B) Arthur C. Clarke
 - (C) Ray Tomlinson
 - (D) Bob Cohen.
43. Which among the following code is used and is accepted worldwide in the present-day computing?
- (A) EBCDIC
 - (B) ASCII
 - (C) ISCII
 - ☒ (D) Both (A) and (B).
44. Which among the following is a computer program which converts each high-level program statement into the machine code?
- (A) Simulator
 - (B) Compiler
 - (C) Decoder
 - (D) Interpreter.

45. Which among the following technologies is used to transmit digital data over telephone lines?
- (A) Cable modem
 - (B) Microwave
 - (C) Integrated services digital network
 - (D) Digital subscriber line.
46. SMTP, FTP, DNS are the protocols of which of the following layer of the OSI model?
- (A) Network layer
 - (B) Transport layer
 - (C) Application layer
 - (D) Data-link layer.
47. Which among the following storage device uses rigid and permanently installed magnetic disks to store data?
- (A) Optical disk
 - (B) Floppy diskette.
 - (C) Permanent disk.
 - (D) Hard disk.
48. is a device that selects between several analog or digital input signals and forwards it to a single output line at higher capacity.
- (A) Hub
 - (B) Bridge
 - (C) Router
 - (D) Multiplexer.

49. In a computer with Windows operating system, files are stored in locations called :
- (A) Storages
 - (B) Programs
 - (C) ~~Directories~~
 - (D) Stack.
50. Which of the following operating systems, enables many people located at various terminals, to use a particular computer system at the same time?
- (A) Network operating system
 - (B) Batch operating system
 - (C) Time-sharing operating system
 - (D) Distributed operating system.
51. System software acts as a bridge between the hardware and software.
- (A) Management
 - (B) Utility
 - (C) Processing
 - (D) ~~Application.~~
52. Which is the type of ROM in which the chip can be erased and reprogrammed on the board easily byte by byte?
- (A) ~~EEPROM~~
 - (B) EPROM
 - (C) PROM
 - (D) Both (B) and (C).

53. The storage area for the next likely data or instruction to be processed preventing bottleneck and slowing of the system is known as
- ☒ (A) Cache
 - (B) Cookies
 - (C) Register
 - (D) CPU.
54. Each telephone regional office needs to be connected to every other regional office. This is an example of which of the following topology?
- (A) Bus topology
 - (B) Tree topology
 - ☒ (C) Ring topology
 - (D) Mesh topology.
55. Assembler is a program that translates the program from :
- (A) High-level to assembly
 - (B) Assembly to machine
 - (C) Machine to assembly
 - (D) Machine to low-level.
56. The purpose of primary key in a database is to :
- (A) Unlock the database
 - (B) Provide a map of the data
 - ☒ (C) Uniquely identify a record
 - (D) Establish constraints on database operations.

57. A is a collection of data that is stored electronically as a series of records in a table.
- (A) Spreadsheet
 - (B) Presentation
 - ☒ (C) Database
 - (D) Web-page.
58. $(6702)_8 = (\text{-----})_2$
- (A) $(101011010111)_2$
 - (B) $(101001010110)_2$
 - ☒ (C) $(110111000010)_2$
 - (D) $(110101101011)_2$
59. The basic architecture of computer was developed by :
- (A) John Von Neumann
 - ☒ (B) Charles Babbage
 - (C) Blaise Pascal
 - (D) Robert Noyce.
60. The device used to connect two networks having different architecture and model is :
- (A) Hub
 - (B) Switch
 - ☒ (C) Modem
 - (D) Gateway.
61. Which of the following technologies were used by third generation computers?
- (A) Transistors .
 - ☒ (B) Integrated circuits
 - (C) Vacuum tubes
 - (D) Semiconductor.

62. CSS stands for :
- (A) Corporate Style Sheet
 - (B) Computing System Sheet
 - ☒ (C) Cascading Style Sheet
 - (D) Communicative System Sheet.
63. In a relational model, relations are termed as :
- (A) Tuples
 - (B) Attributes
 - ☒ (C) Tables
 - (D) Rows.
64. A network that is connected to the internet, but uses encryption to scramble at the data sent through the internet is called :
- (A) Universal network
 - (B) Wireless network
 - (C) Virtual private network
 - (D) Personal area network.
65. Structured programming languages such as C, COBOL and FORTRAN were used in which of the following computers?
- (A) First generation computers
 - (B) Second generation computers
 - (C) Third generation computers
 - ☒ (D) Fourth generation computers.
66. is a communication technology used by some incoming mail servers.
- (A) TCP ☒
 - (B) POP ☒
 - (C) FTP ☒
 - (D) TELNET. ☒

67. What is the name given to the computing infrastructure close to source of data?
- (A) Edge computing
 - (B) Embedded computing
 - (C) Encrypted computing
 - (D) None of the above.
68. A NAND gate has inputs and outputs.
- ☒ (A) High input and high output
 - ☐ (B) High input and low output
 - ☒ (C) Low input and low output
 - ☐ (D) Low input and high output.
69. The layer establishes, maintains, and synchronizes the interactions between communicating devices.
- (A) Transport
 - (B) Network
 - ☒ (C) Session
 - (D) Physical.
70. A is a special program that processes statements written in a particular programming language and turns them into machine language.
- (A) Compiler
 - (B) Device driver
 - (C) Assembler
 - (D) None of the above.
71. Grouping and processing all of a firm's transactions at one time is called :
- (A) A database management system
 - ☒ (B) Batch processing
 - (C) A real-time system
 - (D) An online system.

72. The program which appears to be useful software but will actually do damage once installed are termed as :
- (A) Shareware
 - (B) Worms
 - (C) ☒ Trojans
 - (D) None of the above.
73. Which data structure is based on the Last In First Out (LIFO) principle?
- (A) Tree
 - (B) Linked list
 - (C) ☒ Stack
 - (D) Queue.
74. Which of the following algorithm design technique is used in the quick sort algorithm?
- (A) Dynamic programming
 - (B) Backtracking
 - (C) Divide and conquer
 - (D) Greedy method.
75. Which of them below is a hacking technique in which cybercriminals create fictitious web pages or domains to deceive or obtain more traffic?
- (A) Pharming
 - (B) Mimicking
 - (C) Spamming
 - (D) Website-duplication.
76. means the security of data from tampering by unidentified users.
- (A) Confidentiality
 - (B) Integrity
 - (C) Authentication
 - (D) Non-repudiation.

77. Who was the inventor of the idea of logic gates?
(A) George Boole
(B) Bardeen
(C) Claude Shannon
(D) Konrad Zuse.
78. What is the one's complement for the binary number 011001?
(A) 000111
(B) 100110
(C) 111001
(D) 110001.
79. What does an operating system do?
(A) An interface that regulates hardware and software programs
(B) A hardware device
(C) A program that operates the hardware devices
(D) All of the above.
80. What kind of network protocol sends emails?
(A) HTTP
(B) SNMP
(C) POP3
(D) SMTP.
81. Software applications are created to carry out certain functions connected to managing computer resources :
(A) System software
(B) Utility software
(C) Application software
(D) Helper software.

82. is used to map URL address with IP.
- (A) IP Finder
 - ☒ (B) DNS
 - (C) DHS
 - (D) HTTP.
83. Full adder is also known as :
- (A) AND
 - ☒ (B) OR
 - (C) X-OR
 - (D) NAND.
84. Which SQL Command is used to change table storage characteristics?
- (A) Change table
 - ☒ (B) Modify table
 - (C) Alter table
 - (D) None of the above.
85. To avoid a deadlock state which method is used :
- (A) Banker's algorithm
 - (B) FCFS
 - (C) Priority based
 - ☒ (D) All of the above.
86. The first instruction of bootstrap loader program of an operating system is stored in :
- (A) RAM
 - ☒ (B) BIOS
 - (C) Hard disk
 - (D) None of the above.

87. Which software lifecycle model allows for iterative development and incorporates risk analysis?
(A) Waterfall model
☒ (B) Prototype model
(C) Spiral model
(D) Agile model.
88. The term FLOSS is associated with :
(A) Proprietary software
☒ (B) Unlicensed software
(C) Open-source software
(D) None of the above.
89. The ability to query data, as well as insert, delete and alter tuples is offered :
(A) TCL (Transaction Control Language)
(B) DCL (Data Control Language)
(C) DDL (Data Definition Language)
(D) DML (Data Manipulation Language).
90. What does ASCII stand for?
☒ (A) American Standard Code for Information Interchange
(B) American Scientific Code for Information Interchange
(C) American Scientific Code for Interchanging Information
(D) American Standard Code for Interchanging Information.
91. The participating computers in a network are referred to as :
☒ (A) Clients
(B) Servers
(C) Nodes
(D) CPUs.

92. Which layer of the OSI model is responsible for the transmission and reception to unstructured raw data between a device and a physical transmission medium?
- (A) Transport layer
 - (B) Data-link layer
 - (C) Network layer
 - ☒ (D) Physical layer.
93. Which is known as a type of computing that performs computation, storage and even applications as a service across a network?
- ☒ (A) Cloud computing
 - (B) Distributed computing
 - (C) Parallel computing
 - (D) Virtual computing.
94. Which of the following circuits is used in computers as a memory device?
- (A) Rectifier
 - ☒ (B) Flip-flop
 - (C) Comparator
 - (D) Attenuator.
95. Registers that are used to hold conditional and are only partially visible to users are known as :
- (A) PC
 - (B) General purpose register
 - (C) Memory address register
 - (D) Flags.

96. What are the two properties of RAM?
- (A) ~~Volatile, Temporary~~
 - (B) Non-Volatile, Temporary
 - (C) Volatile, Permanent
 - (D) Non-Volatile, Permanent.
97. What is the process of mapping a virtual address of a variable length onto a physical memory?
- (A) Overlays
 - (B) Segmentation
 - (C) Paging
 - ~~(D) Paging with segmentation.~~
98. Which form of memory allows for the permanent storage of programs and data once they have been created?
- (A) EPROM
 - ~~(B) PROM~~
 - (C) EEPROM
 - ~~(D) None of the above.~~
99. Which of the following is not a multitasking operating system?
- (A) Windows ✓
 - (B) Linux ✓
 - (C) Win NT
 - ~~(D) DOS.~~
100. The time taken by a computer to process a specific task is called :
- ~~(A) Real time~~
 - (B) Response time ✓
 - (C) Waiting time ✓
 - (D) Execution time. ✓